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(54) DEVICE FOR MEASURING GAS CONCENTRATION

(57) Abstract:

PURPOSE: To enable to perform a high-temperature disinfection, by a method wherein a comparision electrode is adhered to a gate part of a pH-sensitive semiconductor sensor, the sensor is housed in a flexible tube, a lead wire is connected to a connector at the rear end of the tube, the inside of the tube is filled with an insulating resin, and the forward end is covered with a gas permeable film.

CONSTITUTION: A comparision electrode 31 comprising Ag/AgCl is deposited to a gate part 22 of a pH-sensitive semiconductor sensor 2, and the gate part 22 is exposed at a forward end of a flexible polyester tube 40 to house the sensor 21 and a lead wire 45 for the sensor and the comparision electrode therein, a core wire 48 such as stainless steel is inserted for reinforcing, and the inside of the tube 40 is filled with an electric insulating resin 42 for curing. The lead wire 45 is then joined to a pin 47 for connector, the tube 40 and the pin 47 are set to a mold forming device, silicon resin is poured into for curing to form a connector part 49. After a part 46 is formed with PVC at the part 49, a forward end 43 is filled with a hydrophilic polymer such as PVC containing an electrolytic aqueous solution such as NaCl, and the whole periphery of the forward end of the tube 40 is covered with a gas permeable teflon film 44. This obtains a device which is used for measuring CO_2 concentration in a living body, can perform a high- pressure steam disinfection, and is high-sensitive.